## **Author Index**

Aalen, R.B. 1433 Adler, B. 627, 1191 Åkerström, B. 239 Akimoto, S. 787 Alazard, R. 459, 1159 Albrechtsen, B. 1385 Alefounder, P.R. 723 Aliabadi, Z. 1605 Alonso, J.C. 1269 Andersen, J.T. 393 Anderson, P. 1463 Apirion, D. 1481 Appleby, L. 257 Archibald, F.S. 1083 Aricò, B. 119, 1661, 1719 Armstrong, S.K. 757 Aronson, A.I. 437, 1533 Arst, Jr, H.N. 553 Arvidson, H. 1533 Atherly, A.G. 65 Auger, E.A. 609 Ayala-Sanmartín, J. 1745

Baehr, W. 49 Bailey, C. 1797 Bakker, D. 645 Bakker, E.P. 487 Bally, M. 261 Barbas, III, C.F. 1625 Barbour, A.G. 479 Barlow, A.K. 131 Barritt, D.S. 583 Baty, D. 679 Baumberg, S. 23 Beacham, I.R. 177 Beger, D.W. 295 Begg, K.J. 267, 1371 Belarbi, A. 421 Belland, R.J. 777 Bennett, G.N. 609 Benson, A.K. 65 Bergström, S. 479 Berry, A. 429 Bessman, M.J. 1391 Bétermier, M. 459, 1159 Betzler, M. 1103 Bhatnagar, R.K. 429 Bhatnagar, S.K. 1391 Biot, T. 1455 Birkmann, A. 187, 697 Birmingham, J. 1329 Björck, L. 319 Bocart, D. 843 Böck, A. 187, 697 Bohin, J.-P. 1173 Bolivar, F. 839

Bolliger, M. 1521 Booth, I.R. 1011, 1025 Bouchard, R.A. 1319 Bouché, F. 991 Bouché, J.-P. 991 Bouia, A. 421 Bouic, K. 1617 Boulnois, G.J. 1819 Bourne, N. 437 Bovy, A. 275 Bowler, L.D. 1277, 1813 Boxer, D. 1709 Boyd, A. 497 Brass, J.M. 1329 Braun, V. 445, 891 Braymer, H.D. 249 Bremer, E. 1287, 1521 Broda, P. 911, 919 Brooks, G.F. 663 Broome-Smith, J.K. 1361, 1813 Brunner, A. 1599 Buck, G.A. 1473 Bundoc, V.G. 479 Burbulys, D. 1203 Burn, J.E. 1567 Buttner, M.J. 1653

Camera, M.G. 269 Cannon, J.G. 43, 583 Cervantes, E. 745 Cevallos, M.A. 879 Chandler, M. 459, 1159 Chantler, S. 311 Charles, T.C. 813 Chaufaux, J. 229 Chauhan, A.K. 1481 Childs, L.C. 609 Clarke, I.N. 131, 311 Clemens, C.M. 57 Cole, S.T. 715, 869, 1121, 1349 Colloms, M.D. 903 Compagno, C. 1003 Condie, A. 267 Conlan, J.W. 311 Cook, W.R. 1329 Coppard, J.R. 1765 Coria, R. 1599 Cornelis, G. 1455 Cornelis, P. 421 Cortes, J. 1405 Coynault, C. 733 Cross, M. 1397 Czaplewski, L. 23

Dale, J.W. 29 Dao, M.L. 469 Dassen, E. 275 Dávalos, A. 879 Davidson, B.E. 1639 de Boer, L. 645 de Bruijn, F.J. 825 de Graaf, F.K. 645 de Graaf, M. 645 de Vrieze, G. 275 de la Cruz, F. 979 Delepelaire, P. 79 Delves, C.J. 1501, 1511 Dempsey, J.F. 583 Dempsey, W.B. 561 Desmet, L. 1145 Dewar, S.J. 1371 Dhillon, N. 1405 Dittrich, W. 1103 Doig, P. 1493 Donachie, W.D. 267, 1371 Donga, J. 1083 Donohue-Rolfe, A. 1231 Dorman, C.J. 531, 933 Dougan, G. 383 Downie, J.A. 87, 1649 Dowson, C.G. 35, 95 Dunkerley, J.C. 1053 Dunn, P.E. 1533 Durand, M.-C. 1221 Durrant, A.J. 1211

Ealing, P.M. 1753 Economou, A. 87 Edmonds, C.J. 1709 Eiglmeier, K. 869 Errington, J. 1053, 1247 Escuyer, V. 807 Espín, G. 879

Faatz, E. 1521 Faelen, M. 1145 Fairweather, N. 383 Falkow, S. 663, 767, 1719, 1833 Ferguson, S.J. 653 Ferhat, A. 1145 Ferrell, R.V. 957 Ferretti, J.J. 197, 469 Filloux, A. 261 Finan, T.M. 813 Finlay, B.B. 1833 Firoozan, M. 215 Foley, M. 1329 Forrester, L.J. 757 Forsman, K. 1557 Forsman, M. 1425 Foster, J.W. 1605 Foulger, D. 1053, 1247 François, V. 995 Frankel, G. 1379, 1729 Friedberg, E.C. 1697 Frithz, E. 1111

Galleni, M. 1091 Gama, M.-J. 1145 García, M. 1599 Garland, P.B. 1329 Garrett, A.R. 177 Gassel, M. 1269 Gauss, P. 1391 Geistlich, M. 1061 Geli, V. 679 Gerstel, B. 851 Ghelardini, P. 269 Ghuysen, J.-M. 1337 Gicquel, B. 843 Gilbert, H.J. 1211 Gill, D.R. 1785 Gill, Jr, P.R. 1183 Gilmore, Jr, R.D. 1579 Giron, J.A. 1729 Glover, S.W. 571, 1461 Gold, L. 1391 Goman, M. 1511 Gómez-Eichelmann, M.C. 1745 Gonzy-Tréboul, G. 103 Göransson, M. 1557 Gotschlich, E.C. 49 Götz, F. 621 Gough, K.R. 35 Graeme-Cook, K.A. 1287 Grandchamp, B. 843 Grant, C.C.R. 371 Grant, C.M. 215 Grass, S. 1797 Green, P.M. 553 Gross, R. 119, 1661 Gubler, M. 141, 149 Guest, J.R. 601 Guiney, D.G. 1617 Gundersen, W.B. 1433 Guo, S. 229 Gustafsson, P. 339 Guyonvarch, A. 421

Haardt, M. 1521 Hacker, J. 1735 Hafer, J. 487 Häggström, B. 1425 Hakenbeck, R. 1337 Hale, R.S. 1405 Hall, J. 1211 Hall, R.M. 1669 Halter, R. 303, 1685 Hamada, S. 221, 673 Hamilton, W.D. 1567 Hammer, K. 1385 Hance, A.J. 843 Hannaaert, V. 421 Hanson, J.H. 985 Harkness, R.E. 891 Hart-Davis, D. 903 Hasegawa, P. 1617 Hawkins, F.K.L. 87 Hayashi, T. 861 Hazlewood, G.P. 1211 Heckels, J.E. 131 Hedén, L.-O. 1111 Heidari, M.B. 957 Henderson, D.J. 1307

Hendry, A.T. 429 Hennecke, H. 141, 697 Henschke, R.B. 1545 Hermant, D. 733 Heuzenroeder, M.W. 295, 303 Higgins, C.F. 3, 531, 933, 1011, 1025, 1287, 1329 Hinton, J.C.D. 1785 Hirashima, A. 359 Hishinuma, F. 861 Hitchcock, P.J. 49 Hoch, J.A. 1203 Hodges, R.S. 1493 Holloway, S.P. 1501, 1511 Holst, B. 1385 Holt, S.E. 1709 Honeyman, A.L. 1257 Honoré, N. 715, 869, 1121, 1349 Hontelez, J.G.J. 1441 Hooykaas, P.J.J. 969 Hopwood, D.A. 1307 Hoschützky, H. 1735 Hove-Jensen, B. 1487 Huang, T.-T. 197 Hubert, J.C. 421 Hughes, C. 1397 Hugouvieux-Cotte-Pattat, N. 285, 573, 1587 Hull, E.P. 553 Hulton, C.S.J. 1011, 1025 Huskisson, N.S. 1211 Hutchison, A. 95 Hütter, R. 1061 Hyde, J.E. 1501, 1511

lismaa, S.E. 943, 1753 Ikemura, H. 359 Ingolia, T.D. 689 Imiger, S. 1061 Irvin, R.T. 1493 Isberg, R.R. 1449 Iuchi, S. 869

Jacewicz, M. 1231 Jackson, C.A. 161 Jalajakumari, M.B. 1685 Jann, K. 1735, 1819 Jaurin, B. 1425 Jeanjean, R. 1221 Jensen, K.F. 393 Jensen, R.A. 429 Jephcott, A.E. 35 Ji, J. 285 Johnson, L.A. 177 Johnston, A.W.B. 87, 1567 Joris, B. 1337 Josephsen, J. 1385 Joset, F. 1221 Joste, N. 1579 Judd, R.C. 637

Kado, C.I. 411, 1237 Kagan-Zur, V. 1371 Kajbaf, M. 311 Kalainov, D. 1697 Kalla, R. 339 Kamio, Y. 861 Kammerer, B. 421 Karamata, D. 1805 Kastern, W. 319 Kawula, T.H. 583 Kehoe, M. 383 Kessler, A. 1103 Keusch, G.T. 1231 Kiwaki, M. 359 Klein, B. 275 Klemm, P. 925 Koch, C. 459 Koga, T. 221, 673 Komatsu, K. 627, 1191 Korhonen, T.K. 329 Kornacker, M.G. 497 Koronakis, V. 1397 Kruyt, F. 275 Kunze, Z.M. 29 Kupke, T. 621 Kuriki, Y. 1131 Kuusela, P. 329

Lachmund, A. 3 Lacroix, J.-M. 1173 Laible, G. 1337 Lambert de Rouvroit, C. 1455 Larsen, N.W. 1463 Lawther, R.P. 1039 Lazdunski, A. 261 Lazdunski, C. 679 Leadlay, P.F. 1405 Lecadet, M.-M. 229 Lechner, M. 621 Lecossier, D. 843 Lee, K.K. 1493 Lefrère, V. 459, 1159 Lereclus, D. 229 Leslie, D. 383 Letoffé, S. 79 Lévy-Frébault, V. 843 Liebart, J.C. 269 Lim, D. 1141 Lin, E.C.C. 869 Lin, H. 1473 Lind, L.K. 339 Lindahl, G. 239, 1111 Lindberg, F. 1091 Lindgren, L. 1425 Lindquist, S. 1091 Livey, I. 985 Loo, L.S.L. 161 Lopes, J.M. 1039 Lossius, I. 1433 Lottspeich, F. 1735 Louarn, J. 995 Louarn, J.-M. 995 Luchansky, J.B. 65 Lucht, J.M. 1521 Lydiate, D.J. 1307 Lynch, A.S. 531

Maas, W.K. 1141 Madsen, O. 925

## 1846 Author Index

Maillet, F. 745 Makino, S. 627 Makino, S.-I. 207 Malke, H. 197 Malley, T. 1697 Mandrand-Berthelot, M.-A. 1709 Manning, P.A. 295, 303, 1685 March, J.B. 903 Margot, P. 1805 Martegani, E. 1003 Masters, M. 903 Mathiopoulos, C. 1071 Matthews, B. 1617 Mauël, C. 1805 May, G. 1287, 1521 McCarthy, J.E.G. 851 McDonald, G.A. 1579 McDonough, K.A. 767 McGee, Z.A. 57 McIntosh, M.A. 757, 957 McPheat, W.L. 985 Mehlert, A. 125 Melchers, L.S. 969 Mendiola, M.V. 979 Meng, S.-Y. 609 Menichi, B. 1173 Menou, G. 229 Merino, E. 839 Merrick, M.J. 1765 Messerotti, L.J. 161 Michiels, T. 1455 Miller, J.R. 689 Millonig, J.H. 257 Miras, I. 733 Mock, M. 807 Molin, S. 1463 Monack, D.M. 1719 Mooi, F.R. 645 Morel, P. 1237 Morrison, S.G. 777 Morschhauser, J. 1735 Mulder, B. 1455 Munson, Jr, R. 1797 Murgier, M. 261 Murphy, K.E. 249

Nagai, S. 1191 Nassif, X. 1349 Neal, B.L. 303 Neilands, J.B. 1183 Newton, S.M.C. 1379 Ni Bhriain, N. 531, 933 Nicolas, M.-H. 1121 Nilsson, P. 1557 Niven, D.F. 1083 Norel, F. 733 Normark, S. 1091 North, A.K. 23 Nücken, E.J. 1545

Ohnishi, Y. 787 Okada, N. 207, 1191 Okahashi, N. 221, 673 Oliver, I.R. 903 Ono, K. 787 Ono, T. 787 Oudega, B. 645

Page, M.D. 653 Pallesen, L. 925 Palmer, L. 663 Paolozzi, L. 269 Paranchych, W. 1493 Park, S.F. 1011, 1025 Pattus, F. 679 Pawlowski, K. 825 Payne, S.M. 1301 Pedrini, A.M. 269 Peoples, O.P. 349 Perego, M. 1203 Perham, R.N. 723 Perrin, D. 807 Pettis, G.S. 757 Pickard, D. 383 Piñón, R. 1319 Plastow, G.S. 497 Plumb, T. 609 Plumbridge, J. 505 Popoff, M.Y. 733 Poulsen, L.K. 1463 Poulsen, P. 393 Powell, B.S. 411, 1237 Prince, R.W. 371 Pugsley, A.P. 3, 497

Quinn, F.D. 797 Quinto, C. 879 Quirk, S. 1391

Raeder, U. 911, 919 Raibaud, O. 455 Rain-Guion, M.-C. 103 Ranzi, B.M. 1003 Rappuoli, R. 119, 1661, 1719 Ratet, P. 825 Rauvala, H. 329 Rauzier, J. 843 Redding, K.E. 609 Regensburg-Tuïnk, A.J.G. 969 Reverchon, S. 573 Ridley, R.G. 1511 Risteli, J. 329 Risteli, L. 329 Robert-Baudouy, J. 285, 573, 1587 Roberts, R.E. 601 Robertson, J.S. 985 Robinson, A.C. 267 Robinson, Jr. E.N. 57 Robinson, G.W. 1697 Roelvink, P.W. 1441 Rogowsky, P.M. 411, 1237 Roos, U. 891 Rosen, B.P. 15 Rosenberg, C. 745 Rothfield, L.I. 1329 Rouch, D.A. 161 Russell, R.R.B. 469 Ruttkowski, E. 3

Saier, Jr, M.H. 113 Saint Girons, I. 1639 Sakikawa, T. 787 Salmond, G.P.C. 1785 San Francisco, M.J.D. 15 Sanchis, V. 229 Sansonetti, P.J. 1349 Sasakawa, C. 207, 221, 627, 673, 1191 Scaife, J.G. 1501, 1511 Scazzocchio, C. 553, 705 Schell, J. 825 Schiebel, E. 445 Schilperoort, R.A. 969 Schmidt, F.R.J. 1545 Schmoll, T. 1735 Schnierow, B. 113 Schoolnik, G.K. 3, 57, 1379, 1729 Schrempf, H. 1103 Scott, K.F. 1753 Sepúlveda, J. 879 Seto, D. 1391 Shafer, W.M. 637 Sharma, S.B. 745 Shimizu-Kadota, M. 359 Shimkets, L.J. 1295 Sibold, L. 541 Sicard, M.A. 1337 Sidebotham, J.M. 1785 Siebers, A. 487 Siede, W. 1697 Sims, P.F.G. 1501 Sinskey, A.J. 349, 1625 Sjöbring, U. 319 Skurnik, M. 517 Skurray, R.A. 161 Sluiters, C. 1455 Smith, M.C.M. 23 Smith, P.K. 1039 Soliman, N. 1039 Sonenshein, A.L. 1071 Song, H.-Y. 437 Sophianopoulou, V. 705 Sory, M.-P. 1455 Souillard, N. 541 Spinola, S.M. 43 Spiro, S. 601 Spratt, B.G. 35, 95, 1277, 1813 Stefanovic, S. 621 Steinmetz, M. 103 Stewart, G.C. 1257 Stewart, G.S.A.B. 1011, 1025 Stirling, D.A. 1011, 1025 Stocker, B.A.D. 1379 Stockley, P.G. 23 Stokes, H.W. 1669 Strauch, M. 1203 Strnad, S. 1533 Strobel, S.M. 43

Tamada, M. 113 Tempête, M. 1173 Terawaki, Y. 861

Swanson, J. 777

Sweeney, J. 267

Thomas, C.J. 295, 303, 1685 Thompson, W. 911, 919 Tisa, L.S. 15 Titani, K. 861 Tobe, T. 627, 1191 Tompkins, L.S. 797 Toussaint, A. 1145 Trageser, M. 593 Tripp, M.L. 1319 Truchet, G. 745 Tuite, M.F. 215

Uhlin, B.E. 1557 Unden, G. 593 Usami, Y. 861

Vader, C.E.M. 645 Valentin-Hansen, P. 1385 Valmassoi, J. 1729 Van Bouchaute, M. 1455 van Gijsegem, F. 1415 van Kammen, A. 1441 van den Bos, R.C. 1441 van der Ley, P. 777 van der Plas, J. 275 Vanooteghem, J.-C. 1455 Vartio, T. 329 Vasil, M.L. 371 Vasse, J. 745 Vasselon, T. 1349 Vázquez, M. 879 Virkola, R. 329 von der Osten, C.H. 1625

Wackernagel, W. 1777 Waddell, L. 1025 Wagner, R. 405 Wandersman, C. 79, 1825 Ward, M.E. 311 Watson, J.M. 943, 1753 Waugh, R. 1709 Weichenhan, D. 1777 Weisbeek, P. 275 Westerlund, B. 329 Wildhardt, G. 3 Wirsel, S. 3 Wise, K.S. 957 Wolf-Watz, H. 517 Wong, C.H. 1625 Woods, J.P. 43, 583 Wootten, L. 1053 Wootton, J.C. 1567 Wretlind, B. 261 Wu, L.-F. 1709

Yamada, M. 113, 207 Yarosh, D.K. 813 Yoganathan, T. 1473 Yoshikawa, M. 207, 221, 627, 673, 1191 Young, D.B. 125 Young, M. 1805 Yudkin, M.D. 257 1848 Author Index

Zacharias, M. 405 Zagorec, M. 103 Zainuddin, Z.F. 29 Zhang, C.-C. 1221 Zhang, Y. 1361 Zürcher, T. 141

## Subject Index

(compiled using key words)

acetyl transferase 1649 acid 1605 activation mechanism 861 acylation 497 AddAB enzyme 1269 Addendum 267 adenylate cyclase 985 adhesins 329, 1735 adhesion 1685 agglutinogen 2 985 Agrobacterium 969 virA 1237 albumin 319 aldolase 723 alk 249 alpha-toxin 383 alpha-tubulin genes 1501 amino acid sequence 517 AmpC 1091 amp gene expression 1131 amylase 3 Anabaena species PCC 7937 275 anaerobic regulation 187, 593, 609, 869, 1709 respiration 593 aniG 1605 anion pump 15 antipeptide antibodies 1493 antitermination 1397 antibiotic resistance 29, 561, 1121, 1617 antibody 57 antigen 131, 221, 673 antimycin-resistance 1599 antisense RNA 561, 715 archaebacteria 541 arginine biosynthesis 23 ARS 1003 arsenical resistance 15 Aspergillus 553 nidulans 705 oryzae 3 ATPase 15, 487 attenuation 393 Azorhizobium caulinodans ORS 571 825 azurin 583 bacillary dysentery 207 Bacillus 103, 1071 acidocaldarius 487 cereus 383

subtilis 23, 257, 437, 1053, 1247, 1257

subtilis 168-W23 hybrids 1805

thuringiensis 229, 621, 1533

bacterial

adherence 1493

gene expression 1557

benzimidazoles 1511 beta -galactosidase 1003 -lactam 689 -lactamase 1091, 1121, 1361, 1425, 1813 -lactamase fusions 1277 -tubulin 1511 binding protein 1329 biosynthesis 653, 1405, 1819 of fimbriae 645 Bordetella pertussis 119, 985 Borrelia burgdorferi 479 Bradyrhizobium japonicum 141, 149 capsule 1819 C4-dicarboxylate transport genes 813 cell adhesion 1449 division 991, 1257, 1329, 1371 envelope 1329 surface 221, 673 surface antigens 1295 wall-associated proteinase 311, 359 cefotaxime PBP 1337 Chi activation 1777 Chlamydia trachomatis 311 chromosomal mapping 1501 chromosomes 1473 Citrobacter 1091 cloning 621, 689, 797, 861 Clostridium 383 vectors 29 coagulase 767 colD sequence 891 colE1 1745 colanic acid 1349 colicin assembly 891 D 891 collagen binding 329 colonization 1685 factor 303 conjugation 561, 573, 1617 conserved domains 1211 genes 1463 sequences 23 copper regulation 275 copy number 903 Corynebacterium glutamicum 1625 cross-adsorbed antiserum 411 **CRP 1605** targets 1385 cryptic plasmid 1433 crystal protein 229

Bacteroides 1617

cyanobacteria 275, 339, 1211, 1221 cysE 1649 cysteline residue 593 cytR regulation 1385 cytochrome b 1599 cytochrome c 653 cytotoxin 797, 861, 1231

dci 1071 deletion analysis 1061 mutation 1487 deletions 1103 delta-endotoxin 229 development 1247 dGTPase 1391 dicB 991 dicF 991 dihydrofolate reductase 161 dipooligosaccharide 637 disulphides 1533 diuron-resistance 1599 DNA -binding protein 1061 gyrase 1287 hybridization 295, 319

gyrase 1287 hybridization 295, 319 ligiase 269 probe 295 -protein interaction 257 -protein recognition 979 repair 249, 295, 319, 1697 -RNA compound 1141 sequence 943, 1735, 1753 sequencing 1415, 1579 supercoiling 933, 1025, 1287 topology 269

earA 1605 Editorial 1 electron microscopy 57 elongation factor 745 encoded proteins 733 enterobactin biosynthesis 757 enterotoxin 303 Erwinia chrysanthemi 79, 285, 573, 1415, 1587 eryC1 1405 erythrocyte membrane 445 erythromycin 1405 Escherichia coli 23, 329, 601, 621, 723, 995, 1039, 1173, 1349, 1361, 1745, 1813 atp operon 851 B 1141 ETEC 1685, 1729 evolution 161, 1379 exonuclease V 1777 exotoxin A 371 export 285, 1819 expression system 861

Fc receptor 239 fdh 187 fdhF 697 ferredoxin 141 fibrinolysin 767

extrachromosomal mutations 1599

filamentous fungi 3 filter-binding 411 fim-lac fusions 925 fimbriae 645, 1735 type 1 925 finP 561 Fis 459 fix 1753 fix 141, 149 flagellin gene 1379 flavanoid nod gene inducer molecule 87 fnr 601, 825 FNR 593, 869, 1709 formate dehydrogenase 187 formate induction 697 F plasmid 787 frd 869 fructose-1,6-biphosphate aldolase 1625 ftsA 1371 fungal genetic map 911 idiophase 919 fusion protein 411

G418 1003 gel electrophoresis 1481 retardation 411 amplification 531 cloning 221, 1579 clusters 723, 911 control 925 dispersal 1545 duplication 531 evolution 689 expression 269, 601, 1319, 1545, 1813 family 3 fusions 371 location 609 regulation 87, 825, 1697 structure 1425 transfer 1545 genetic map 573 genetics 131, 1819 genomic duplication 839 variability 957 global regulation 933 glucosamine 505 glucose transport 1221 glyceraldehyde 3-phosphate dehydrogenase 723 glycine betaine 1011, 1521 glycolytic enzymes 723 growth control 1319 -rate dependence 1371 gyrB mutants 269

haem insertion 653 haemolysin 797, 1397 haemolysis 383 Haemophilus influenzae 1797 Haemophilus pleuropneumoniae 1083 heat
-modification 663
-shock 125, 215
helix-turn-helix 257
homology 1221
host specificity 745
host-range 879
HPr 113
hsp 215
hsp70 125
hybrid
transcripts 715
gene product 645
hyd 1709
hydropathy 705

IgA 239 IgA receptor 1111 immunoblotting 645 immunoelectron microscopy 645 immunoglobulin 319 in vitro protein synthesis 807 induction 1425 insertion sequences 161, 985 instability 1103 integrable plasmid 65 integration/substitution/deletion 1545 integrin 1449 integron 1669 internal promoters 405, 1039 introns 3, 1501 invasion 627, 1191, 1833 iron 371, 1083 transport 757 uptake 1183, 1301 IS481v1 985 IS481v2 985 IUMS News 571, 1461

kanamycin-resistance cassette 1487 K-antigen 1819 karyotype 1473 kcpA 207 Kdp 487 keratoconjunctivitis 207 K88 fibrillae 645 Klebsiella pneumoniae 1349, 1765 Kluyveromyces lactis 1599

lacA 1649
lacZYA fusions 1719
lactic streptococci 359
lactose-proteinase plasmid 359
Legionella 797
leprosy 125
lignin peroxidase
activity 919
genes 911
linear plasmid 479
linkage 1753
linker genes 339
lipopolysaccharide 295
lipoprotein 497, 1277
I 421

H.8 43, 49, 583 Lon 1349 luciferase 1011, 1025 Lyme disease 479

M proteins 1111 mRNA stability 851 structure 851 macrolide antibiotics 1405 malaria 1511 mannose 1605 Medicago sativa 745 membrane 1329, 1819 anchor 1277 depolarization 1463 localization 757 proteases 807 protein 679, 1237, 1813 meningococci 131 metal ions 593 metF 1639 Methanococcus 541 methylenetetrahydrofolate reductase 1639 microbial differentiation 1653 mini-circle 1307 mistranslation 215 mitomycin 1269 molecular analysis 479 cloning 207, 1173 epidemiology 35 **mRNA** stability 851 structure 851 msDNA 1141 mutants 943, 1221 mycobacteria 29, 125, 843 mycoplasma 957 myxobacteria 1141, 1295

N-acetyl-glucosamine 505 NADH dehydrogenase 601 nalidixic acid 1269 ndh 601 negative control 1385 Neisseria 43, 49, 57, 429, 583, 663 gonorrhoeae 35, 637, 1433 meningitidis 777 NH4 response 1319 nickel 1709 nif 553, 697, 943, 1753 nifA 825, 1441 nitrite reductase 653 nitrogenase 541 nitrogen fixation 141, 149, 1441, 1765 nod 1753 regulation 1567 nodD 87, 1567 nodL 1649 nodPQ 745 nodulation 87, 1649 nodulation genes 879

non-coordinate expression 1039
nrdA 839
ntr 825
ntrA 187
nucleoproteins 455
nucleotide metabolism 1487
nucleotide sequence 95, 359, 421, 479, 517, 673, 757, 861,
1111, 1211, 1221, 1319, 1625

O-antigen 295 oligonucleotide probes 35, 689 oligoprobes 1729 oligosaccharide 1173 OMP profiles 1083 OMPC 531, 1287 OMPF 531, 1287 **OMPR 933** open reading frames 393 operator 1639 optA 1391 osmoregulation 1173, 1025, 1287, 1521 outer membrane 421 association 1433 protein 1797 protein, major 311 protein P.II 777 oxygen control 825

palindromic sequences 505 Paracoccus denitrificans 653 pathogenesis 197 pathogenic Escherichia coli 1735 pBR322 1131, 1745 pBR328 1131 pcnB 903 PCR 843, 1379, 1729 pectate lyases 285, 1415, 1785 pectin methyl esterase 1587 pectinolysis 1587 pel gene families 1785 penicillin -binding proteins 35, 95, 1337 resistance 35, 95 pentapeptide repeats 43, 49 peptides 311 periplasm 653, 1329 periplasmic Pel isoenzymes 1785 binding protein 1025 proteins 1813 space 1173 permeases 705 pertussis toxim 119 pH 609 regulation 1605 phage Mu 459, 1145, 1159 phase variation 777, 925, 1719 Phaseolus vulgaris 879 phenylalanine inhibitor 429 phoA recombinant plasmid 679 phosphatidylinositol 621 phosphoglycerate kinase 723 phospholipase 383

phosphotransferase 103, 113

phycobilisome 339 phycocyanin 339 pili 57, 1295 pilin 303, 1493 plague 767 plasmid 15, 903, 1745 integration/dis-integration 65 Plasmodium falciparum 1501, 1511 plastocyanin 275 PLb 1785 PLc 1785 Pneumocystis carinii 1473 polarity 1039 polyamines 609 polyhydroxybutyrate 349 polysaccharide 1819 pORF1 1131 porins 933, 1287, 1797 positive activators 455 control 149, 1385, 1557 regulators 869 post-transcriptional gene regulation 141 regulation 1463 potassium transport 487 pPQ126 65 precursor processing 437 primary structure 1625 processing 1825 proU 933, 1025, 1521 prokaryotic insertion sequence 957 leucine zipper protein 957 proline 705 catabolism 553 promoter occlusion 715 promoters 371, 1025, 1521, 1653 divergent 393 internal 405 protease 797, 1825 inhibitor 79 protein 1 637 II 663 Arp 239, 1111 delta 319 -DNA interactions 459, 1159, 1557 domains 1159 engineering 689 membrane 1521 outer surface 479 P2 1797 phosphorylation 1319 secretion 261, 1825 surface, 120kD 1579 surface prediction 1493 synthesis in vitro 807 translocation 1361 wall-associated 469 proteolysis 1277 Proteus mirabilis 1777 protoplast transformation 65 protoxins 1533

PRPP synthetase 1487 genes 1397 prs 1487 sensor 1661 Pseudomonas aeruginosa 261, 421, 861, 1493 sensory transducers 1121 pts 103, 113 sequence 705 pullulanase 497 amino acid 517 pyrE 393 analysis 1501 pyrimidine biosynthesis 393 **DNA 621** pYV plasmid 1455 homology 1625 palindromic 505 quantitative sequencing 1481 characters 919 Serény test 207 hybridization 1805 serine protease 359 R46 1669 -rich 1211 RAD2 1697 serotype 295 readthrough 787 Serratia 249 rec 249 haemolysin 445 RecA 1349 marcescens 445 recBCD enzyme 1777 S-fimbrial adhesins 1735 recE transcriptional fusion 1269 shiga toxin 1231 recF 1269 Shigella 627, 1301, 1729 recombinant flexneri 207 DNA 733, 1131 shigellae 1191 phoA plasmid 679 sialic acid 1735 plasmids 807 siderophore 1183 recombination 1777 sigma factor 257, 1653, 1765 regulated promoter 1061 signal regulation 23, 371, 627, 1203, 1425, 1441, 1587 molecules 969 mutation 1567 peptide 275, 1361 regulator 1661 transduction 1319, 1661 regulatory proteins 1121 similarity 705 REP sequences 757, 839 site replication 903 -directed mutagenesis 679, 1567, 1639 origin 455, 995 -specific integration 1669 repressor 1203, 1639 -specific recombination 1545 reverse transcriptase 1141 small RNA 1481 rfb region 295 S1 mapping 1481 soluble penicillin-binding proteins 1277 RFLP mapping 911, 919 rhi 87 SOS-response 715 Rhizobium 1183, 1567 specificity 1533 leguminosarum 1441, 1649 spheroplast 29 meliloti 745, 813 spo 1071 spollIE 1247 phaseoli 879 trifolii 943, 1753 spolliG 1247 rho-mediated transcription termination 1039 spoVJ expression 1053 Rickettsia 1579 spontaneous deletions 1719 rifampicin 787 spores 437 RNA polymerase 1653 sporulation 257, 1053, 1071, 1203, 1247 RNA processing 505 smB 787 RNase 807 stability 1745 rod operon 339 Staphylococcus aureus 65, 621 stoichiometry 1231 rpoN 1765 streptococci 197, 239, 319 rRNA genes 1473 rRNA synthesis 405 Streptococcus 469, 1337 mutans 221, 673 Saccharomyces 215, 1697 pneumoniae 95 cerevisiae 705, 1697 pyogenes 1111 Saccharopolyspora erythraea 1405 streptokinase 197 Salmonella 113, 177, 1605, 1833 Streptomyces 1425, 1653 serotype Typhimurium 733 coelicolor A3(2) 1307 typhi 1379 glaucescens 1061 lividans 1103 typhimurium 1039 subcellular localization 1433 secreted proteases 79 secretion 285, 497 subunits 1231

## 1854 Subject Index

sugar transporter 1221 sulphonamide resistance 1669 suppressor 1685 surface exposure 637 Sym plasmid 879 symbiosis 141, 149, 879 Synechococcus 339 species PCC 79442 275

tag 1805 tar 1805 teichoic acid 1257 genes 1805 terminator 787 tetracycline resistance 1103, 1617 thermophilic bacteria 541 thylakoid lumen 275 thymidylate synthetase 161 Tn21 1669 Tn5 insertion mutagenesis 733 toc 531 topoisomerase 531, 1287 Torulaspora delbrueckii 1003 toxin 1301 traJ 561 traM 561 transacetylase 1649 transcription 455 transcriptional regulation 1371 transcript mapping 1061 transcription 787, 1203, 1397, 1425, 1653 antitermination 405 control 601 termination, rho-mediated 1039 transcriptional activation 969, 1557 analysis 1625 regulation 1719 transduction 573 transferrin 1083 transformation 29 translational enhancer 411 initiation and coupling 851

regulation 1131
transmembrane signalling 1121
transpeptidase 95
transport 1025
transposable element 1307
transposable element 1307
transposase 1159, 1307
transposition 459, 1145
transposons 65, 161, 979, 1545
trimethoprim resistance 161
two-component regulatory systems 411, 1237, 1661
type 1 fimbriae 925
tyrosine synthesis 429

UDP-sugar hydrolase 177 ultraviolet sensitivity 1777 upstream activator 187 activator sequence 149 activator site 1061 regulatory sequences 697 ush 177

vaccine 131, 311 vectors, 2μm 1003 vir 969, 1191, 1719 -inducers 969 virulence 1191, 1301, 1455 antigens 627, 1191 factor 119, 125 plasmid 733, 1191

wap 469

xcp 261 xylanase 1211

yeast 1361, 1599, 1697 Yersinia 1455, 1449 pestis 767 species 517 yopA 517 Yop1 protein 517 yop regulation 1455

Zooglea 349

